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Substitute for form 1449/PTO  
**INFORMATION DISCLOSURE  
 STATEMENT BY APPLICANT**

Date Submitted: June 25, 2009

(use as many sheets as necessary)

Sheet 1 of 3

**Complete if Known**

Application Number	10/523,167
Filing Date	3/10/2006
First Named Inventor	Mohammad Borran
Art Unit	2611
Examiner Name	Kevin Michael Burd
Attorney Docket Number	088245-0799

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
		US-7,269,436	09-11-2007	Won, Seung Hwan	
		US-7,149,239	12-12-2006	Hudson, John E.	
		US-7,116,652	10-03-2006	Lozano, Angel	
		US-7,027,485	04-11-2006	Yue, Lin	
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		US-4,866,395	09-12-1985	Hostetter, G. Robert	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Documents	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code*Number <sup>3</sup> Kind Code <sup>2</sup> (if known)				
		EP 1324558	07-02-2003	Sony International (Europe) GmbH		
		RU 2,145,152	01-27-2000	Garmonov Aleksandr Vasil'evich	With English Abstract	
		RU 2,192,094	10/27/2002	Garmonov Aleksandr Vasil- evich	With English Abstract	
		KR 2002-0076049	10-09-2002	Kim et al.	With English counterpart	

**NON PATENT LITERATURE DOCUMENTS**

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		BORRAN et al., "Constellations for Imperfect Channel State Information at the Receiver," 40th Annual Allerton Conference on Communication, Control and Computing, October 2002.	

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			<b>Art Unit</b>	2611
			<b>Examiner Name</b>	Kevin Michael Burd
Date Submitted: June 25, 2009			<b>Attorney Docket Number</b>	088245-0799
(use as many sheets as necessary)				
Sheet	2	of	3	

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		BORRAN, et al., "Constellations for Imperfect Channel State Information at the Receiver, Rice University power point presentation," October 2002.		
		CHAN, ALBERT M., et al., "A New Reduced-Complexity Sphere Decoder for Multiple Antenna Systems," Proc. Int. conf. Commun. (ICC-02) (New York City) April 2002.		
		Copy of Translation of Decision on Grant for Russian Patent Application No. 2005141578, received April, 19, 2007.		
		Cover, T.M. and Thomas, J.A., "Elements of Information Theory," Wiley Interscience, 1991, p. 231.		
		International Preliminary Examination Report for PCT/IB03/02088 completed March 21, 2004.		
		International Search Report for PCT/IB03/02088 mailed October 23, 2003.		
		International Search Report and Written Opinion for PCT/IB2004/01566 mailed February 8, 2005.		
		Rice Digital Scholarship Archive information regarding Borran et al document, printed 4/1/08.		
		Communication for EP 04 755 820.0 – 1525, dated 5/19/2009.		
		Supplementary European Search Report for EP 03 73 5862 dated 6/9/2005.		
		Tarokh et al. "Space-Time Codes for High Data Rate Wireless Communication: Performance Criterion and Code Construction." Information Theory, IEEE Transactions on Volume 44, Issue 2, Mar 1998 Page(s):744 - 765		
		Office Action from Korean Intellectual Property Office for corresponding Korean Application Number 10-2008-7015598, dated 8/21/2008.		

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		Supplementary European Search Report for EP 04 75 5820 dated February 16, 2009	
		AAZHANG B et al, "On Design Criteria and Construction of Noncoherent Space Time Constellations", IEEE Transactions on Information Theory, US, vol. 49, no. 10, October 1, 2003, pages 2332-2351.	
		International Search Report and Written Opinion for PCT/US04/19909, mailed December 14, 2005.	
		International Preliminary Report on Patentability for PCT/US2004/019909, issued January 3, 2006.	
		Office Action from Chinese Patent Office for related Chinese Application Number, 200480017820.6, dated October 31, 2008.	

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